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SOME LILIES OF SUMMER AND AUTUMN.

SOON after the white Madonna lilies of our garden had faded, the Martagon buds began to deepen into fiery scarlet. Ellwanger calls this lily "One of the grand things in red; a sight for a cardinal to dream of and a humming-blrd to admire." We surely gave it its full meed of appreciation, for it does not seem to take kindly to our garden, though its cultural requirements are said to be very simple, and a rich, full cluster of its scarlet flowers is a rare treat to us. The flowers are

only two or three flowers at the top of each tall stem, but their color and fragrance is unique and exquisite.

The elegans lilies must be among those meek flowers that are to inherit the earth. They are low in stature, so robust that they will endure shameful neglect, and they spread in a manner that certainly seems to claim fulfilment of the promise. None of them ever came up to my expectations except *L. elegans atrosanguineum*, which has very



From an original photograph

FIELD OF SPECIOSUM LILIES
IN NEW JERSEY

not very different from those of *Lilium tenuifolium*, but massed on shorter stems at the top of a long wand, are shown to better effect.

Beautiful creamy buff *L. excelsum* is thought to be a natural hybrid between *L. candidum* and this Martagon lily. As the blooming time of the two sometimes meets this would be possible, I suppose. I had forgotten the exact location of my *L. excelsum* bulb, and as its flower-stems run up in the same way and at the same time as *L. candidum*'s, I could not tell it from the flower-stems of the latter until it became, a little belated in the race and its buds turned downward before opening, instead of obliquely upright as those of *L. candidum* do. There are

dark, rich flowers. *L. elegans* "Midnight" was a fresh disappointment for this year; its flowers were very little darker than those of most other varieties in this large species. Unlike most other lilies these like the full sun. I can find but little difference between *L. croceum* and some varieties of the *elegans* species.

A very capricious and exquisite little lily is *L. Krameri*; the bulb is small and delicate in character, resenting undue moisture in winter. Lately I have been lifting my bulbs in autumn,—carefully, and without shaking away the soil,—and wintering them on the floor in the cellar. The smooth, slender stem bears one or two delicate pink, fragrant



LILIAM SPECIOSUM PRÆCOX

flowers at its top. To finally succeed with this little beauty is worth a good many years' trial.

The tawny tiger lilies are a feature of July. I can never quite follow out Thomas Bailey Aldrich's fancy about them:

"For they are tall and slender,
Their mouths are dashed with carmine;
And when the wind sweeps by them,
On their emerald stalks
They bend so proud and graceful,
They are Circassian women,
The favorites of the Sultan,
Adown our garden walks,

"And when the rain is falling
I sit beside the window
And watch them glow and glisten,—
How they burn and glow!
O, for the burning lilies,
The tender Eastern lilies,
The gorgeous tiger lilies
That in our garden grow."

Quite as hardy and easy to grow is *L. Batemanniae*. The shallow chalices face upward, but the surface of bright salmon-yellow does not freckle at all, under even the hottest suns.

Our auratum lilies have been particularly fine this year,—especially the old types, *L. auratum macranthum* and *L. auratum vittatum rubrum*. Some flowers of *macranthum* were almost white and we thought them the handsomest. One fine old bulb of *L. auratum*, that was as large as a tea-saucer when planted last year, this year sent up seven stems instead of one, producing forty-eight flowers in all; they were all enormous, healthy flowers and beautifully colored. In all this bed of auratum lilies we had no flower-stem with more than twenty-one buds upon it, and have been wondering how in the world gardeners produce those fabled stems of from fifty to 150 flowers, and whether any stem other than an iron rod could uphold 150 flowers so large and heavy as our auratum lilies were. Or are the blossoms much smaller when they are produced in such numbers on one stem?

Latest of all are the speciosum or lancifolium lilies, forming their buds oddly and

stiffly at the tips of the flower-stem's branches. Your first impression is that the stem is flowerless, for the bud seems to *grow*, not *unfold*, from the tip of the stem. All the speciosums that I have ever grown have a thick, waxen fringe of pink or white about the center of the flowers, giving the species quite an air of individuality. *L. speciosum* "Opal" was new to me last year, and I watched its buds opening with much interest. It is a dainty, lovely flower, but, to my mind, not so beautiful as the pure white *præcox* variety.

And so, with the speciosums our lily chapter must close for the year. Oh, for some "hybrids" to extend the season. Yet the double auratums and tigrinums are such monstrosities that efforts in this direction seem like vandalism.

North Carolina.

L. GREENLEE.

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FREESIAS, AND HOW TO GROW THEM.

I THINK no other winter-blooming bulb possesses so many charming and sterling qualities as *Freesia refracta alba*. A succession of flowers may be obtained by planting the bulbs from August on through October. The very best results, however, will follow early planting. To have them in bloom at Christmas-time they should be started in August or September. Soil and temperature are all in all to successful freesia culture; without due attention to these considerations the best bulbs may yield but a limited supply of poor flowers, borne on stems too frail to properly support



LILIAM SPECIOSUM RUBRUM



LILIAM AURATUM VITTATUM

them, and these supplemented by a scanty, grass-like foliage drooping forlornly over the sides of the pot. Now, as to soil: A mixture of two parts of leaf mold and one of old, thoroughly decayed manure, with a little coarse sand mixed in, makes a soil that is none too rich for freesias, and will yield a rich harvest of blossoms. There is, however, so much danger in the inexperienced selection of manure and the tendency to make-shifts, that the following compost is preferable for general amateur use: Add one part of fibrous or turfy loam, well rotted, to two parts of old leaf mold, and to a quart of this mixture add one-half pint of coarse sand and a tablespoonful of sifted wood ashes; the latter keeps the soil sweet and friable.

It always pays to get the mammoth bulbs. Plant six of them in a five-inch pot, placing them about an inch below the surface of the soil, and watering lightly. For early plantings set them out doors in a shady place,—the north side of the house where they receive only a little morning and afternoon sun, or the shadiest corner of an east porch; continue to water them lightly. They must not be hurried. After the young shoots appear, gradually give more sunshine, until they can bear a full supply. When frosts threaten, set them in a protected place at night, but do not bring them indoors until there is actual danger of freezing, and

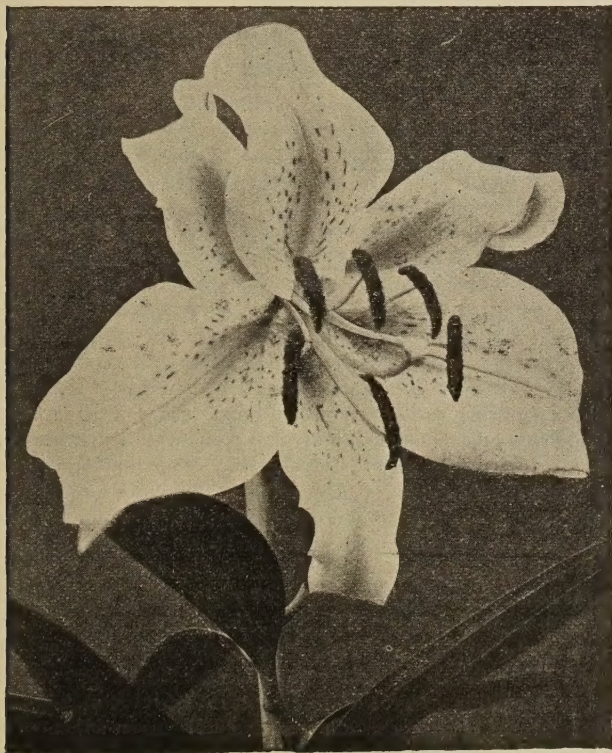
then place them in a cool, fireless room, and give plenty of sunshine. If the bulbs are received too late for this outdoor treatment, pot as directed and set away in a cool cellar for a week or two, bringing them above just as soon as the shoots appear, placing them in a cool but sunny situation. By either of these methods you will have strong and healthy plants. I keep mine all winter in a south bay window, in a fireless room, where, by closing the doors at night, the temperature is just above the freezing point, and decidedly cool close to the glass during the day in the severest weather. I pour quite warm water into the saucers every morning, and as soon as the soil is thoroughly saturated remove the surplus; they are semi-aquatic in their demands, but after they are in full bloom less water is necessary. The result of this treatment is a sturdy growth of sword-like foliage, each plant resembling a miniature gladiolus, the stems exceedingly strong and wiry, the flowers large, creamy and lily-like, and with most exquisite fragrance. A pot of them is a mass of bloom, and with very rich soil and plenty of sunshine, *F. refracta alba* develops lovely sub-tints of violet and rosy purple; sometimes its creamy tint deepens into a light straw color. Every lovely characteristic is intensified by good treatment. When a plant is well loaded with flowers I give but an hour or two of strong sunshine in the morning, to preserve their vigor, then remove to a shaded position; by this means the blossoms hang on and the plants continue to bloom for weeks,—the most exquisite flower imaginable for all decorative purposes. With good cultivation and careful ripening the bulbs multiply and bloom on year after year. Keep in the sunshine after they are done blooming, gradually withholding water until the foliage looks yellow and ripened, then set away undisturbed in the pots, in a cool cellar, and repot in fresh soil the next season.

MRS. A. H. HAZLETT.

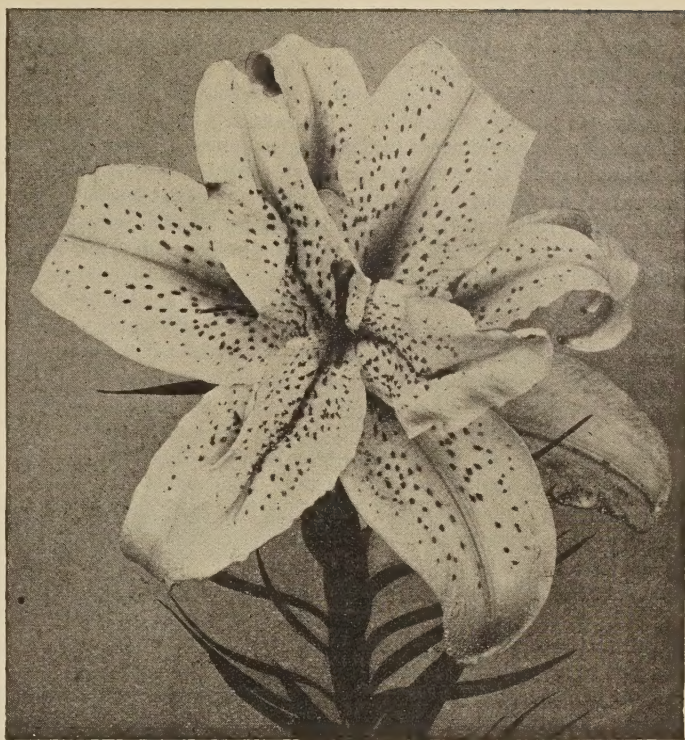
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THE ROCK GARDEN.

ONE finds examples of rockwork in some parks and in private grounds in this country. When well made these objects add grace and beauty to the scene. It is evident, however, that many of the so-called rockeries attempted are not only failures from an artistic point of view, but positive blemishes to the landscape. The treatment of a rockery should not be difficult. If one is so fortunate as to be able to seize upon a point where nature has lent her kindly assistance,—a picturesque gorge whose rocky walls and ridges, with outcropping masses of grey and brown stones may be transformed into miracles of beauty, with perhaps, also, by way of relief, a tiny cataract of sparkling water adding its romantic beauty to the scene,—matters are wonderfully smoothed. Here ferns and moisture-loving plants could find grateful homes in moist nooks, their green foliage mingling in exquisite harmony with the crystal sheen of the water. Or a mimic cañon may be at hand



LILIUM AURATUM MACRANTHUM



A DOUBLE AURATUM LILY

where arches of living green, daintily moss-grown outcropping ledges, and sombre rocks inspired to ineffable beauty by the pink, and gold, and red blaze of numerous plants, would enhance the attractiveness of the natural scenery.

But if these embodying principals do not exist, the site must be prepared. The surface of the ground must be decidedly undulating, with distinctive sharp slopes and terrace effects to relieve any natural flatness of the ground. If a small stream of water may be introduced it will afford manifold variations and a greater variety of treatment; but it will give more attractiveness to the scene if, by the introduction of huge boulders, the water be made to form tiny cascades and rocky rapids, with perhaps a lakelet, where an aquatic garden would give promise of future beauty.

Avoid all stiff and unnatural arrangements. Numerous repetitions give to rockwork a studied effect, which is to be avoided. Draw some lessons from Dame Nature's floral material,—as found in wild habitats, and aim to interpret some simple rural beauty. Above all, avoid making those absurdities called "pockets." Crevices there should be in abundance, which should gradually widen downward and connect with the soil below, as most Alpine plants have long and abundant roots; these, when planted, will follow a crevice for a long distance and eventually find sufficient soil for the roots.

The object in making rockwork is to create beauty, not to suggest "improvements" unlike nature's attractive material in its primitive form. Where marked features are introduced, aim to have agreeable, easy transitions from one object to another, without any abrupt breaks to mar the harmony of the whole. In preparing the soil for planting, adapt it, as much as circumstances will allow, to the requirements of the plants. The ground must be thoroughly and deeply spaded where the plants are to be placed; then filled with peaty soil or leaf mold made friable with admixture of sand, or loam with broken sandstone or lime for such plants as are natives of calcareous localities. The crevices should likewise be filled with suitable soil. Planting in properly prepared land gives results far beyond general expectations.

When the possibilities of the site are grasped and the preparations for the foundation completed, the next consideration is to study the grouping of the plants,—not only with regard to their relation to each other, but also with regard to the impressiveness of their appearance in combination. No matter how limited the planting or simple the arrangement, if proper grouping be lost sight of the effect is inferior. Do not set the plants in a formal manner; again, led by a desire for display, many flower-lovers bring too many plants into the rock-garden and scatter them about unduly, thus producing a muddled effect; this general scattering is also undesirable. The plants should be so arranged that their merits and peculiarities are noticeable in a marked manner, while their

beauty and variety is enhanced by excellent arrangement, each plant exquisitely poised and harmonizing in all its parts, thus forming a spectacle of beauty. The larger specimens of plants should be irregularly grouped to advantage in the background and about the lower portion of the rockwork; some of them on mounds, as they may be supposed to take root on a rocky eminence in their Alpine home. The intervening chinks in the rocks and mossy boulders are planted to smaller things.

Since rock-gardening has become popular many plants have appeared in our gardens that formerly were rarely seen out of their native localities. No one need be deterred from engaging in this form of gardening by the fear that he might not be able to stock it with suitable plants; there need be no difficulty in this respect, as there are many distinct species of hardy plants adapted to the purpose,—plants native to mountainous regions, that cannot be grown save in a position similar to which they are found in nature. It is obvious that in selecting plants for this purpose those with attractive foliage as well as flowers, and persistent leaves, are to be preferred.

Native flowers, charming in their own haunts, are equally so in the rock-garden. Cultivation does not detract from plants of the genus *Saxifraga* their grace and beauty; this genus is a large one, with varieties native to this country and the mountains of Europe. The varieties have much dissimilarity, with unusual foliage and dainty habit of growth. *Saxifraga Virginensis* has thick obovate leaves, forming dense clusters, crowned with panicles of white flowers. *S. cordifolia* has ample heart-shaped leaves prettily veined with white, and bright rosy flowers. *S. punctata* throws up its reniform leaves on long stems; the leaves are a vivid green in color, with white markings, the edges daintily scalloped; the under part of foliage is, as in most saxifrages, covered with soft, downy hairs, which makes it soft and velvety to the touch, and a red tinge adds to the showy appearance of the plant; the flower stalks shoot up from the clustering leaves bearing panicles of faint pink flowers enlivened by the rich brown stamens. Other desirable species are *Saxifraga longifolia*, *S. cordifolia*, *S. punctata*, *S. peltata* and *S. granulata*.

Allied to the saxifragas is the *Tiarella cordifolia*, with its neat mat-like foliage and white blossoms. Though the individual flowers of this genus are small, the panicles are large and lasting. The flowers begin to open when the stems are but a few inches high, and by the time the flowers are fairly expanded, the cluster is on a stem often three feet tall. They then present a very different aspect from that at the beginning, as the flower cluster, at length, opens into a spreading panicle.

All varieties of anemones are charming for rockwork. They are so cheerful with their crisp, green leaves, spangled with flowers of the most pleasing tints. *Anemone Japonica* blooms in the late fall when blossoms are beginning to be scarce. Its rather large flowers are a beautiful shade of pale magenta, and retain their beauty for a long time. *A. fulgens* is the earliest variety. In early spring its bright, rich red blossoms spring from its rosettes of foliage, and vie in grace with the dainty *A. nemorosa* with its delicate little blossoms of tender hue. A sub-genus is the hepatica, with its early spring flowers, so delicate in their fairy-like beauty.

Akin to the aristocratic spicy carnation is the little single pink with its clove-like fragrance. The foliage grows in dense tufts, its wiry stems surmounted by the blossoms with level spreading petals. They are especially adapted to rockwork. Perhaps the loveliest is *Dianthus glacialis*, a native of the high Alps. The word *dianthus* means "Flower of Jove." This variety, with flowers a clear rose pink, has a purity and vividness of coloring that would do justice to Jupiter's taste, did he select it for his own. *D. deltoideus* and *D. cæsius* are also well adapted

to the rock-garden. A worthy relative of the dianthus is the silene, amongst which are many varieties which make welcome additions to our list of rock plants. They vary in height from six inches to a foot; the dwarf varieties carpeting the ground with their dense bluish-green foliage gemmed with star-like flowers. Of the dwarf forms may be mentioned *S. maritima* and *S. pusilla*. *Gentiana lutea* is so unlike the blue gentians as to be frequently mistaken as a member of some other genus. It throws up a tall stem, the lower leaves are large and spreading, but gradually decrease in size toward the top of stem, where the clear golden yellow flowers appear in large whorls.

Arabis alpina is a neat dwarf plant, with pure white blossoms, while *Polemonium reptans* has loose panicles of charming blue flowers.

A pretty Alpine plant that presents many claims to popularity is *Anthericum liliastrum*, commonly known as "St. Bruno's Lily." The foliage is reed-like, of low growth. The flower-stalks shoot up to a height of twelve to eighteen inches, the upper part covered with clustering pendulous flowers, which represent a liliputian form of *Lilium candidum*. The blossoms are sweetly fragrant, a clear brilliant white, save for a tiny green spot at each division of the petals.

Cornus Canadensis, a dwarf form of the "Flowering Dogwood," will give a touch of color to some dark, damp corner. The leaves appear on the end of stems about five inches tall, in a whorl of four to six. The tiny greenish flowers are surrounded by four large white bracts, which are commonly mistaken for the blossoms, but they merely form a showy appendage to the true blossoms. It's a very curious and showy

little plant, especially for winter effect, when the glory of its red berries is apparent.

For a graceful and stately effect *Corydalis nobilis*—with its palmate leaves—is very effective. Its dense panicles of blossoms form a striking combination of color. When the pale green buds open the glowing yellow of the blossoms will blaze forth, with their rich brown markings, in an impressive manner.

A very stately plant, with finely divided leaves and tall spikes of rare blue flowers, is *Acanthus candelabrum*. For symmetry of form and dainty loveliness a clump of *Trientalis Americana* has few equals; its habit is ex-

quisite in its neatness, and its star-like white blossoms chaste in their purity.

Daphne Cneorum is very desirable for rock-work; the buds are "wee crimson tipped," but the flowers show a rosy lilac. Another pretty little trailing plant—which placed in juxtaposition to the above would act as a foil while being in no sense a rival—is *Convolvulus mauritanicus* with its exquisite blue flowers. Another little gem is *Houstonia cærulea*, a native to the Northern states, known locally as "Bluets." This plant forms a lovely bank of green dotted with its jewel-like blossoms, and the white flowering variety *H. rotundifolia*, with daintily overlapping stems and starry flowers, thatches the dull rocks with softest beauty. For a graceful shower of foliage to drape a rocky ledge nothing is so showy as our Northern *Aquilegia Canadensis*. In the early spring its bronzy folds push out of the ground and develop into deep green foliage, which later forms a mass of glowing scarlet and yellow, adding beauty to its strength and fragrance to the winds. The "Climbing Bittersweet," *Celastrus scandens*, will give touches of grace and glowing beauty to the autumn months with its rich tints of brilliant orange and scarlet. These may be augmented by Alpine asters rosetted and tufted with blue and gold; the moss-like selaginellas and the sedums which will spread in a continuous growth like a green velvet carpet, the effect further increased by their star-like flowers, like gems on a sheet of velvet, with here and anon—for quiet beauty—the demure tender myosotis, and for flaming bits of color *Lobelia cardinalis*. Here we may also con-



From a photograph
Looking down stream

NATURAL BRIDGE
DOUGLAS, WYOMING

sider the lilies, and in cool shady nooks the picturesque ferns will make beautiful and obvious harmony with each other and the rocks.

And amid all this culture do not obliterate any touches that nature in her tender moods may wish to lay on. The rock garden should be as if Dame Nature had fingered every plant.

Here something of the simplicity and peace of nature and the gladness of fresh, wild beauty will ever inhere and meet with responsive emotions in our hearts.

ELEANOR M. LUCAS.

* *

THE CANDIDUM LILY.

I OFTEN wonder why folks who live where this loveliest of all lovely lilies can be easily grown, do not grow it more freely. I have not succeeded with it here,—I think the weather is too cold,—but I have seen it growing abundantly in New York State and in Ontario, so I know that in a great many of our States it can be grown in perfection. A friend of mine has it growing in such profusion that she declares she does not know what to do with the flowers, she has so many of them; the bulbs have been set for years and have been left undisturbed. I know this lily does not take kindly to disturbance and it might be that you wouldn't get many flowers the first year if you should make a setting of the bulbs, but even if there were not a flower I would set them and let them take their time to come into bloom, which they will surely do when they have developed sufficient strength and become accustomed to their new quarters. If I lived where I could grow these lilies it would be a stringent reason indeed that would prevent my having them in quantities in their season.

Some make the mistake of setting the bulbs too near the surface. One who grows them successfully says that they should be eight, or even ten inches below the surface. It will take time for the bulbs to come up in the spring, but they will be strongly rooted and will need no staking when the blooming stalks appear. One thing must be observed in growing these bulbs,—they must be set in a thoroughly drained place; no water should stand at their roots, or they will as surely rot as the sun will rise and set. I think I should fill a trench or hole with sand to some depth and place my lily bulbs on that as a "starter," having good soil all around, so that when well established they could draw the needed nourishment from this adjacent bank. When these bulbs once do take hold and get started in a place they will grow on for years and years and each succeeding year will see them increase until, as my friend says, "You won't know what to do with the blossoms,"—which really would be a dilemma very much to be desired by a lily lover. However, I think an embarrassment of such riches could easily be endured, for there would be many willing to relieve the glut on the market; and when one lives near a city, as many folks do, there are always the hospitals, asylums, etc., where flowers are thankfully received, and such flowers as the candidum lily would be accepted with acclamation. The fall is the time to set the bulbs, and "There is no time like the present time," some very wise person has declared.

South Dakota.

* *

AN AUTUMN LEAF.

One crimson autumn leaf, from distant forest grand,
The winds, in sportive mood, on city pavement laid;
A weeping babe drew near, and caught with eager hand
The gaudy, glowing leaf, then lightly laughed and played
In unalloyed delight; while passing to and fro
The people smiled to see this tiny child of grief,
Forlorn and hungry still, forget its present woe,
And gather peace and joy from one stray autumn leaf.

Pennsylvania.

RUTH RAYMOND.

THE ASTER DISEASE.

LAST summer I had my first experience with the aster disease, which seems to be universal, judging from the complaints that come from different parts of the country. My plants looked healthy until almost time to bud, then the tips of branches, stems, and buds began to turn a pale, whitish shade of green. I could not account for the trouble, and at first supposed it was owing to some fungous disease. I also examined the stem, outside and inside, thinking it might be the work of an insect, but found nothing to account for the blight. Late in the season I pulled up a plant and noticed that the dirt clinging to the roots was infested with minute insects somewhat resembling the green aphids, except that they were a trifle smaller and varied in color from white to dark, grayish green. It was then too late in the season to make any experiments with a view to saving these asters, but I resolved to make a vigorous fight another year, for these beautiful flowers.

This spring, before the seeds were planted, they were all dipped in a solution of corrosive sublimate,—one grain to one ounce of water. The seeds were started in the house, and transplanted once into shallow boxes; before they were planted out, the ground where they were

to be set was thoroughly watered with kerosene emulsion. When the plants were about six inches tall they were so thoroughly drenched with Bordeaux mixture that every leaf was coated with the bluish-white fluid; about the same time the ground was again watered with kerosene emulsion, and again when they began to bud.

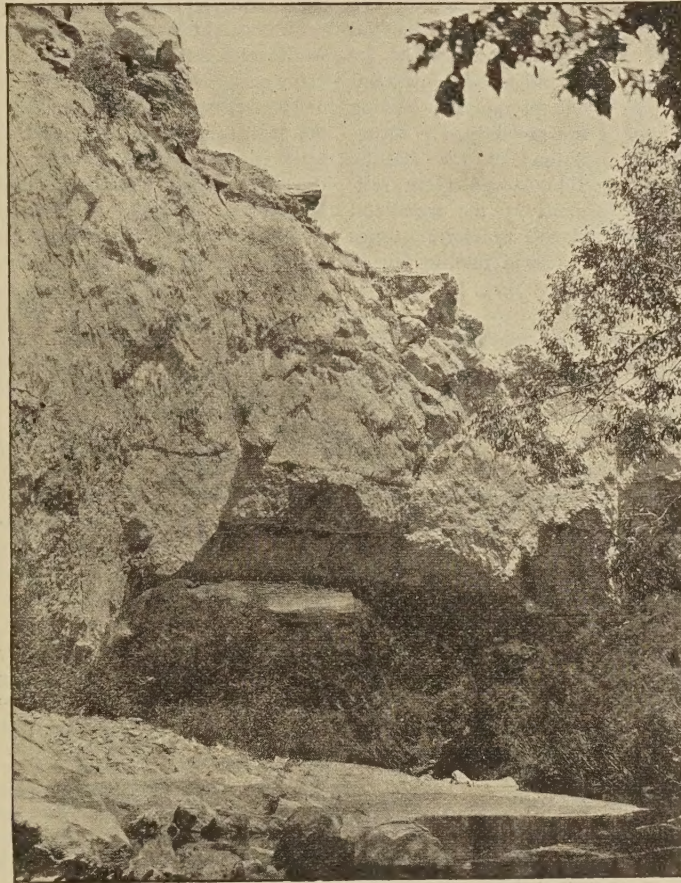
This treatment was along the lines adopted by some practitioners of medicine, who, when in doubt, write a lengthy prescription, hoping something may hit the case,—and some of my remedies evidently have hit the aster disease, for I have, just coming into bloom, three as fine beds of asters as it was ever my good fortune to raise, while a fourth bed that has had no treatment, except soaking the seeds in the solution of corrosive sublimate, has behaved precisely as my asters did last year, and the roots are covered with the same kind of insect. None of the asters were planted where asters grew the previous year.

"One swallow does not make a summer," and one summer's experiments are not conclusive. Another year I shall experiment still further, using the kerosene emulsion and Bordeaux mixture, both separately and upon the same beds.

Wisconsin.

I. McROSS.

* *



From a photograph
Looking up stream

NATURAL BRIDGE
DOUGLAS WYOMING

LARGEST NATURAL BRIDGE IN THE WORLD.

THIS beautiful wonder of nature is situated twenty miles southwest of Douglas, Wyoming, where the La Prele creek breaks through the foothills of the Laramie Mountains. The stream here flows, or rather tumbles and pitches, through a narrow, ragged cañon about 1,000 feet in depth. Near the lower end of the gorge a ledge or wall of solid rock, about 150 feet in height, stretches right across the cañon. In time long past the water has plunged over the top of this rock wall, which was then a natural dam; but finally the water found a way underneath, and the result is this bridge. In span of its arch it exceeds anything of its kind in the known world. From buttress to buttress the bridge is 180 feet; highest point of arch about seventy-five feet above the water, and breadth of under side, up and down stream, eighty feet. As will be seen in the accompanying illustrations, the arch is almost as perfect as though built by man's hands rather than formed by the action of water. Not alone for this remarkable bridge does it pay the tourist to visit this spot; the wild grand beauty of the cañon is well worth seeing, and added to this is a "Crystal Cave" in which may be seen countless numbers of beautiful quartz crystals of various sizes and shapes.

Douglas, Wyoming.

S. L.

IN NATURE'S GARDEN.

A FAIR June morning, the month of roses, I am sauntering along a familiar railroad cut, by cultivated fields and forest growths; I go through the hills and bridge the valleys, the sun-lit landscape in panoramic retreat passing on either side, ever changing and ever beautiful.



$\frac{1}{2}$ natural size LATHYRUS MARITIMUS

and wayside by their familiar names and tell the wonderful stories enfolded in their tiny blossoms, but he who has lived intelligently in their near neighborhood and has made himself acquainted with their life habits and associations?

The air is filled with the fragrance of clover blossoms,—not the large and showy heads commonly cultivated, but the less conspicuous variety with dull cream-white florets merging into flesh color and red in the lower rows of blooms; this modest clover grows in clumps by the wayside and is known as the Alsike clover, quite a foreign name for such a quiet, unobtrusive neighbor.

Here to the left is the common milk weed, *Asclepias cornuti*, a sturdy plant and a great favorite with nectar-loving insects; the masses of flowers clustered in the axils of the large sessile leaves, are a dull grayish pink and are very fragrant, a quality not common in the wild flowers. The butterfly weed, *Asclepias tuberosa*, on a sandy knoll near by, displays its clustered heads of brilliant orange blossoms; this is another of the milk weeds, so called, by the way, because of the milk white, sticky fluid which exudes from the stems and leaves of the plants when cut or broken; this species does well in the garden, and is very showy, sweet scented, of easy culture, and fine for cutting. There are others of this interesting genus, of more slender habit, with smaller clusters of white or light colored flowers, but they prefer a retired life in the sheltering woods.

Isolated patches of yarrow, *Achillea Millefolium*, are just coming into bloom; the clusters of white flowers and fern-like foliage are very ornamental. A rose pink variety is rare hereabouts, but grandmother will tell you of its being a garden favorite in the olden time; it is very pretty, of neat habit, and fine for bouquets.

The blue flag, *Iris versicolor*, is beyond its best, but is still beautiful; the shaded pond yonder gives many belated blooms.

The daisies are omnipresent. But then it may be all are not daisies that are called such; the name "daisy" seems to be freely applied to any flowers that are daisy-like in form; the name yellow daisy is frequently applied to the cone flower, *Rudbeckia hirta*, and occasionally to the native *Helianthus* or sunflowers; the name blue daisy refers to the *Boltonias* and wild asters, a large group; the ox-eye daisy is a *Chrysanthemum*; the pink daisy is one of the fleabanes, *Erigeron philadelphicus*; and the mayweed, *Matricaria inodora*, is—well, another daisy. This last and the ox-eye, with the fleabanes, are what are most commonly called daisies in our native flora. These have white or tinted rays and yellow discs; of these the ox-eye is excellent for cutting, but horrid as a weed.

A few rods beyond me is the lake, with a fine, hard, sandy beach, along the inner margin of which may be noted large and fine growths

of the beach pea, *Lathyrus maritimus*, one of the handsomest of the wild peas. There is fine symmetry of outline and stateliness in the pose of the wild peas; in the large sagittate stipules, the broad oval leaflets and stout ribbed stems of the beach pea there is a suggestion of strength and robustness, and the deep green color of the foliage, and its remarkable freedom from insect marring, speak of a healthy growth, while the long-stemmed panicles of crimson and lavender flowers are in perfect keeping with the whole; it makes a very pretty border on the beach, reaching well out to the water-line of high tide. Fine for bouquets and decorative purposes.

Lathyrus ochroleucus is very graceful and much less formal in habit than *L. maritimus*; the stipules are halberd-shaped, half as long as the leaflets which are ovate, five to eight in number, and of a light warm green; the flowers are creamy white, from four to six on drooping peduncles.

L. palustris grows in swamps and wet grounds; stem winged on either side; stipules halberd-shaped, less than half the length of the leaflets, of which there are about three pairs, two inches long, lance-linear, mucronate or bristle pointed; in some specimens the leaflets are lance-ovate, as shown in fig. 2; flowers lavender and rosy purple.

At my right is a small inlet, the wild growth closing it in all around, while trees near by overreach it and give shade to the tenants of this "tiny ocean world," for here live and thrive several species of batrachia, newts, turtles, frogs, and like ilk. Among the water plants may be noted the sagittarias, or arrow heads, not yet in bloom; the white and yellow water lilies, *Nymphaea odorata* and *Nelumbo luteum*, in full flower; the small, starry blossoms of the white crowfoot or water buttercup, *Ranunculus aquatilis*; the cat-tails and other species of rushes. In this small pondlet of a few square rods are hidden the mysteries of many lives, all having their significance, a purpose, and a place in the "make up" of the foreground of the ever present.

May we, with them, fill our niche in the great economy, and have an abiding consciousness of the welcome plaudit "Well done!"

JOHN WALTON.

Monroe County, New York.

CHOICE VARIETIES OF PEAS.

A writer in the *Journal of Horticulture*, under the title of "The Pick of the Peas," says:

Peas are good this year, and the rising reputation of several comparatively new sorts seems likely to be augmented. First among them, although not absolutely the earliest, is *Gradus*. It will be a very surprising thing to me if this pea does not elbow out large numbers of the standard earlies. When you get a three and a half foot pea that is only a few days later than *Lightning*, that has as fine a pod as *Duke of Albany*, and that possesses *Sweet Marrow* flavor, you have a sort to which that much abused phrase "a great acquisition" deservedly applies. Although strongly prepossessed in favor of the variety before sowing, from seeing it so good last year, I was inclined to look coldly on it in the early stages of its growth this season, as it was rather "niggly" and slow in development.

When *Lightning*, *Early Giant*, *Springtide*, *Early Morn*, *Wm. Hurst*, *English Wonder* and *Chelsea Gem* were full of bloom, *Gradus* was in a very leisurely manner proceeding to develop its first flowers. When fairly started, however, it went ahead with such leaps and bounds as to outstrip all except *Lightning* and *Springtide*. Though barely so early as these, it is a vastly superior pea.

Daisy, in its turn a few days behind *Gradus*, is a splendid sort. It bears the fine, imposing pods of a main-crop *Marrow* on haulm barely two feet in height. It is a very healthy grower, with a plenty of color and substance.

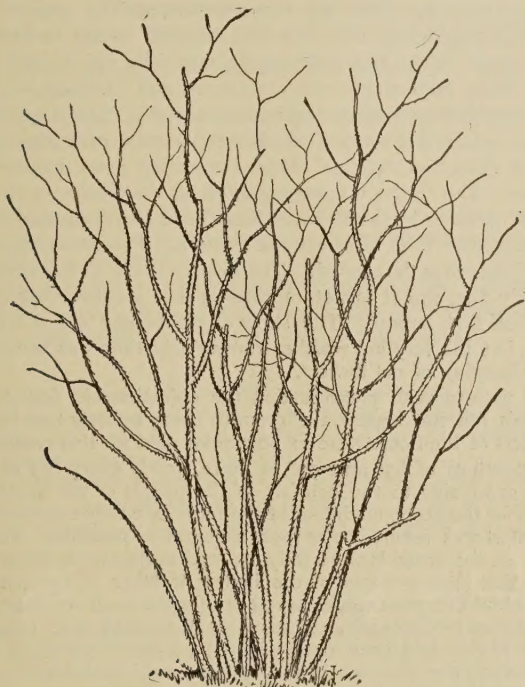
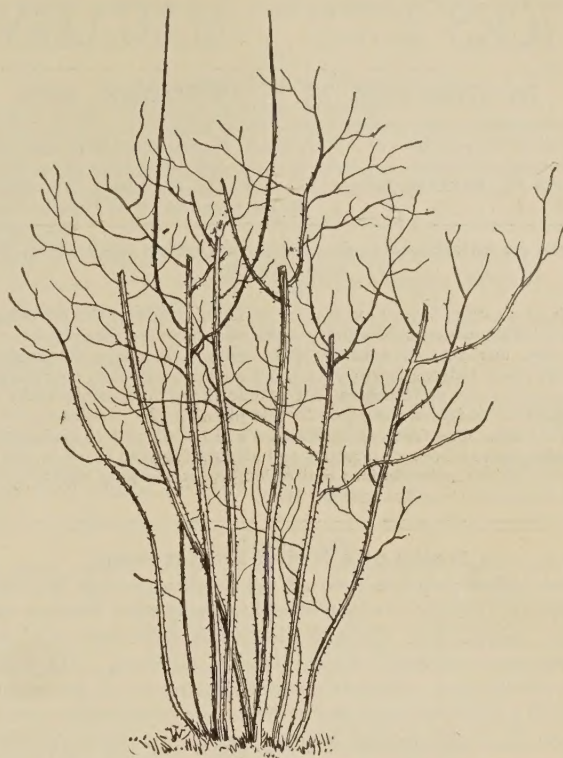


$\frac{1}{2}$ natural size

LATHYRUS PALUSTRIS

PRUNING ROSES—No. IV.

THE moss and hardy yellow roses require to be pruned somewhat differently from the hybrid perpetuals, in fact more nearly according to the instructions given in our last number for the hardy climbing roses, and yet the pruning of these varieties, like that of all others, is governed by that supreme rule which requires that *weak plants, or plants of weak growing varieties, shall be pruned more closely than those which are strong.* The illustrations presented on this page of a specimen of the Common Moss rose and the Persian Yellow tell the story of their proper pruning more forcibly than may be described in words. The illustrations have been produced from accurate sketches of plants both before and after pruning, and the pruning was done by an experienced and skilful rose-grower. The Persian Yellow, here represented by a plant five feet in height, and the Common Moss four and a half feet in height, may both be considered as plants of medium or better than

COMMON MOSS ROSE
BEFORE PRUNINGPERSIAN YELLOW ROSE
BEFORE PRUNING

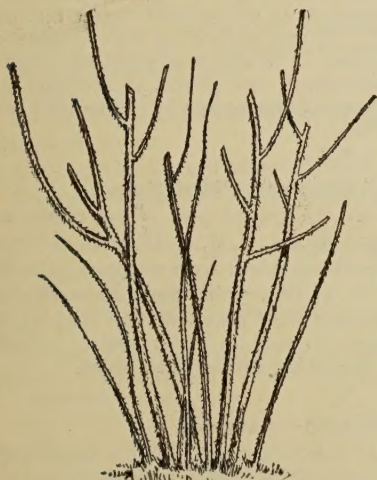
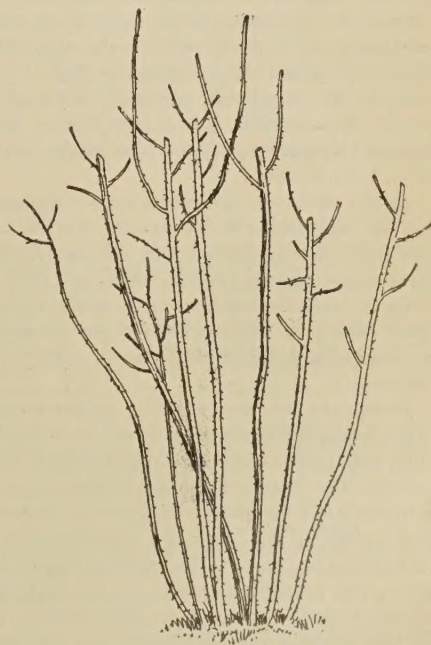
medium growth. The new growth of last year is represented by the side branches, and this is the flower bearing wood,—that is, the young shoots growing in the spring from this wood bear the flowers. Strong plants, such as these, are capable of producing many blooms, consequently there is no necessity for close pruning. The beauty of a hardy yellow rose bush depends upon a good display of flowers, the plant being well covered with bloom. In the case of the moss rose the expanded flower counts for but little,—the beauty is in the bud, and the buds are usually cut as fast as they begin to show the petal; there is no desire, therefore, for large flowers, consequently the plants can be allowed to bear a much larger crop than those of hybrid perpetuals, and the pruning is longer accordingly. By examining the illustrations it may

be observed that two weak canes from the base of the Persian Yellow, and one weak one, the third from the left of the Common Moss, and an old cane, the second from the right on the same plant, have been cut away entirely at the surface of the ground. From the base of each of these canes thus cut away, there will be a tendency to throw up a strong young cane that can be depended upon the next season for some bearing shoots. The rest of the pruning has consisted in cutting away the upper ends of the branches, much of which was weak and twiggy, the weaker branches being shortened more than the strong

ones. As the old stems become too tall, carrying their new wood so high as to mar the symmetry of the plants, they can be cut out even with the ground, and new stems, which every year push up, will take their places. Some authorities advise in relation to the Persian Yellow and Harison Yellow, that two sets of plants be kept, one set to be short pruned and the other long pruned each year, alternately, no bloom being expected on those that are short pruned. This advice would apply as well to the moss roses. In fact, it is something that is seldom done, and the constant renewal of canes from the base, if these are carefully guarded and managed, makes the practice unnecessary.

It will be noticed that in the plants before pruning, the stems at the center of the bush are the longer ones, and it may be inferred that such growth is in accordance with the previous season's pruning, but it may also be said that such pruning corresponds to the natural growth. The tendency is for each stem to push out its shoots or branches and branchlets to the light, consequently the plant naturally makes its strongest growth at the center. This fact the pruner should observe, and also he should remove any canes that may be necessary when the growth at the center is too crowded, bearing in mind that light is needed by all the foliage in order to produce healthy wood.

The pruning of these roses, and all others, should be done only in the spring in all severe climates. For the benefit of those who are quite inexperienced it may be proper to state that when dormant plants of roses of any kind are set out in the spring they should be cut back sharp, saving only four or five buds above the surface of the ground. If such plants are set in autumn they should not be touched with the knife, but left until spring and pruned then. The danger of freezing back is much greater when the young plants are pruned or shortened in the fall.

COMMON MOSS ROSE
AFTER PRUNINGPERSIAN YELLOW ROSE
AFTER PRUNING

VICKS ILLUSTRATED MONTHLY... MAGAZINE

ROCHESTER, N. Y., OCTOBER, 1898

*Entered in the postoffice at Rochester, N. Y., as second class mail matter.*CHARLES W. SEELYE, Editor. ELIAS A. LONG, Associate.
Formerly conductor of *Popular Gardening*

Publishers are invited to use any articles contained in this number, if proper credit is given.

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FREE COPIES. One free copy additional will be allowed to each club of ten (in addition to all other premiums and offers), if spoken of when club is sent. All contributions, subscriptions and orders for advertising should be sent to VICK PUBLISHING CO., ROCHESTER, N. Y.

Death of a Noted Fruitgrower.

On the 15th of July last occurred the death of George W. Campbell, of Delaware, Ohio, at the age of eighty-one years. Early in life Mr. Campbell moved from Cortlandville in this State and settled at Delaware, where he remained until the time of his death. He made fruit culture his life work, and was especially interested in the grape. He introduced and disseminated the Delaware grape sometime in the '50's. For many years past he has been engaged in cross-fertilizing the grape for the purpose of securing a variety of acceptable quality, and which should be as well adapted to vineyard culture and for market as the Concord. Such a variety he believed he had secured some years since, and since then has been proving it, until it finally was placed in the hands of a propagator some two years ago, and has already been sent out under the name of Campbell's Early.

In business affairs Mr. Campbell was a man of the highest integrity, and those who dealt with him, and knew him best, always placed complete confidence in his word. He had a high reputation among his associate horticulturists and his loss is sincerely mourned.

* *

New York State Experiment Station.

A new biological and dairy building has just been completed on the grounds of the New York Experiment Station, at Geneva, N. Y. A public reception, with appropriate exercises, was held on the 21st day of September. A large number of persons attended from all parts of the State, besides distinguished visitors from other States. Among the latter were the Hon. James Wilson, Secretary of Agriculture, who delivered an address, and Hon. Charles W. Garfield, of Michigan, and ex-Governor Hoard, of Wisconsin, both of whom made addresses. Dr. W. H. Jordan, director of the Station staff, presided and made some happy remarks at the opening of the meeting, of which two sessions were held in a large tent on the grounds. An eloquent greeting on behalf of the Board of Control was made by the Hon. Frederick C. Shraub, of Lowville, N. Y. A greeting on behalf of the citizens of Geneva was given by Dr. Robert Ellis Jones, president of Hobart College. Short and appropriate addresses were also made by Hon. Sereno E. Payne and Hon. John Raines.

In the afternoon addresses were delivered by the Hon. Charles W. Garfield and Hon. W. D. Hoard. In the evening a reception in the new building was tendered by the Board of Control to the citizens of Geneva and visiting friends, which was very enjoyable.

In the new forcing house was made a display, during the day, of a great variety of fruits raised on the grounds, consisting principally of apples, pears, peaches, plums and grapes. This exhibition was a very fine one.

In regard to the new building we have room only to state briefly that it is a handsome structure, four stories in height, including basement and attic, constructed of cream-colored pressed brick and red Medina sandstone. The interior finish is handsome and substantial. The building includes a full equipment of the most improved machines, implements and appliances for butter and cheese making, and a steam engine providing working power. It is heated by steam and lighted by electricity. There are twenty-nine rooms in the building. Very handsome rooms are fitted up for the use of the horticulturist and his assistants, another for the horticultural laboratory, and two rooms for the horticultural museum. Other rooms are devoted to the botanist, chemist, bacteriologist, entomologist, and for photographic work. The whole cost of the

building and equipment has been \$41,000. The credit for this valuable addition to the Experiment Station is due largely to the wisdom and exertions of Dr. Jordan, supplemented by the action of the Board of Control and our State legislators.

The New York Experiment Station, as at present organized by Dr. Jordan and his assistants, is one of the most effective institutions of its kind in the country, and is conferring most substantial benefits upon the farming population of this State. It is worthy of the beautiful building of which it has now come into possession, and our own State and the country at large will be enriched by the results which will ensue from the improved equipment of this institution of agricultural research.

* *

New York State Fair.

The last exhibition of the New York State Agricultural Society was probably the largest and best one it ever made. The entries in every department were more than usually numerous, and all articles very fine. The animal department, from the best blooded horses and cattle down to the bantam chicks and Guinea pigs, was fully and splendidly represented. Farm implements and appliances, and products of all kinds, were shown by large numbers of manufacturers. The display of vegetables was grand, and some of the finest specimens ever seen. The collection of fruits was extremely large, embracing great numbers of fine specimens. The rivalry was very spirited for the display of the greatest collection of fruits by the Western New York Horticultural Society and the Eastern New York Horticultural Society. The former took the first prize and the latter the second. The display of the Eastern Society was remarkably fine, and it is not improbable that another year will see it carrying off first honors. The show of plants and cut flowers was a fine one, but the very hot weather during fair time was unfavorable to the good keeping of cut flowers.

It was noticed with pleasure that the objectionable feature of fakir side shows did not appear, the grounds being entirely free from them. The officers of the Society are to be commended for this result.

A temperature of 85° and 90° or more, nearly every day of the fair, was not conducive to the comfort of the people or the animals. The buildings for the accommodation of the latter are very commodious and their comfort was secured to as great a degree as possible. The people, however, on the grounds were fully exposed to the sun from a cloudless sky, and that during some of the hottest weather of the past season. How thankful everyone would have been for the shade of trees, but not a tree adorns the grounds. It is a great mistake that they are not planted. If this had been done when the grounds were first occupied by the Society, the trees would now afford considerable shade, and each succeeding year would increase their beauty and usefulness. This is a matter which should be no longer delayed, and a proper committee should be appointed and funds appropriated to plant the grounds suitably and in good style.

* *

Present and Future of the Magazine.

The present issue of VICKS MAGAZINE closes the 21st volume. We think we can refer with pride to this volume as one that has been attractive, entertaining and instructive to its readers. The raising of flowers and vegetables, and the improvement and adornment of the home grounds have been the prominent subjects in its pages, as they will continue to be in the future. But many of these subjects will probably receive new treatment as improved methods of culture are adopted; the improvements and advances in plant culture and all kinds of garden work are as great as in any other occupation, and we intend that our readers shall have the best and latest information in all departments of home gardening. With the experience of the past we expect that the next volume shall be still better. To this end we ask the assistance of our readers in two ways: First, send us notes about your own plants, trees, shrubs, and methods of cultivation; and second, let everyone say a good word to his neighbor and secure him as one of the 100,000 subscribers comprising our list in 1899.

* *

Asters and the Tarnished Plant Bug.

A case of injury to asters where the greater part of 750 plants are seriously affected has been reported by Mrs. C. M. McDougall, of Plattsburgh, N. Y. Insects of different kinds which were supposed to be the cause were supplied, and Mr. E. P. Felt, acting State Entomologist, kindly examined them and recognized the Tarnished Plant Bug, *Lygus pratensis*, as the probable deceptor. "About the only remedy," he says, "is beating the bugs into a pan containing kerosene and water."

* *

Black Beetle on Asters.

A correspondent of the *Florists' Review* states that he has found slug-shot to be a sure and cheap exterminator of the black beetle so destructive to the aster, dahlia and gladiolus. He advises to use it early in the morning when the dew is on the foliage.

Letter Box.

In this department we shall be pleased to answer any questions relating to Flowers, Vegetables and Plants, and to publish the experiences of our readers.

EDITORS.

Insects on Plants.

Please state what can be done to destroy the little white flies which infest house plants. I notice cuttings which I had started for winter seem to be full of them. I spray constantly, but they fly off only to return. Mrs. L. H. M. Auburn, Mass.

The cuttings can be dusted with insect powder, or with tobacco dust or snuff.

++

Wintering Begonias and Cacti.

1—Please state how to winter begonias, and if they can be kept with safety in a cellar.

2—Also can cacti be wintered in the cellar with safety? Mrs. H. S. Upper Alton, Ill.

1—Begonias should be kept in a living-room; they need warmth.

2—Cactus plants may be wintered in a dry, warm cellar.

++

Scale on Cactus.

Please inform me through the Letter Box how to treat cactus. They have been affected by a sort of scale; the thing is a whitish looking scale, in appearance somewhat like dandruff. A. E. L.

From what is said it may be judged that the mealy bug is infesting the cactus plants. Touch them with a drop of diluted alcohol, and then, with an old tooth-brush and soap and water, brush them off.

++

Training Raspberries and Blackberries.

I have in my garden several raspberry and blackberry plants. They throw out long shoots, five or six feet. Can you tell me the proper treatment for them; should they be trained on poles or trimmed? C. D. H.

They can be trained to stakes if so desired, but the usual custom is to pinch back the canes when about two or two and a half feet high, causing them to throw out strong lateral branches. With such treatment stakes or poles are not necessary.

++

Trouble with Asters.

I would be pleased to see an article in the MAGAZINE relative to the diseases of asters. Have had very fine asters for years past, but this year the flowers do not come out,—some will be one-sided, but with most of them the petals have no color in them, and are short, except a few near the outside. It is not the work of the aster beetle, although they have hurt some others here. I find the roots are more or less covered with white lice, which I take it are the sole cause. Can we do anything for them,—that is, so we may raise them another year, or will it be best not to try asters again for a few years? It cannot be the seed, as some parties who used my seed obtained from Vick have had very fine asters. We have had some trouble from aster blight, but do not notice it on those affected as above stated. J. F. M.

Ashtabula, Ohio.

Our correspondent will please read the communication on page 185 in this number, and also note what is said on the same subject, page 190.

++

Plants for Certain Places.—Keeping Tender Bulbs.

1—Please tell me what to plant in a shaded corner of a yard. I want something that is at all times neat and pretty, and also a hardy perennial; would like a blooming plant. Would Funkia alba do well in such a situation?

2—In a bed in the center of the yard and which gets but little direct sunshine, I think of a center of caladiums. What shall I put around the edge? Will coleus or cannas do well there?

3—Can I keep bulbs and roots, such as begonias and Madeira vine, in a cupboard off a cool room? Basement is too warm in the steam part and too damp, I fear, in the vegetable room. E. F. H.

Clearfield, Pa.

1—The Funkia,—white day lily or plantain lily,—will do well in the place mentioned.

2—It will be all right to use coleus for the outside row.

3—Yes, the cupboard will probably be just the place for them.

++

Mushrooms.—Grafting Fruit Trees.

1—Please give information in regard to mushrooms,—all about their culture, and if it would be healthful to raise them in the cellar. I have a nice place under the rear of the house, if they would keep from freezing; I have no way of heating it.

2—Will you also tell me when is the best time to graft apple trees and the Oxheart cherry trees, and if I could do it myself. Miss L. B. Saratoga Springs, N. Y.

1—In regard to mushrooms read what is published in this October number of the MAGAZINE, page 195. The place mentioned under the rear of the house will not do, since it cannot be kept warm. There is no objection to making a bed in the cellar.

2—The time to graft fruit trees is early in spring. It requires experi-

ence and skill to graft well; you could not do it yourself. Get a good grafter to do it.

++

Some Ornamental Plants.

1—What are the best cannas for winter blooming?

2—What varieties of dracæna make a rapid growth like *D. terminalis*? Are *D. amabilis* and *D. Baptisti* of that class?

3—How are *Asparagus Sprengeri* and *A. plumosus nana* propagated?

4—What is the proper treatment for *Pandanus Veitchii*? Does it require sun or shade? A. L.

New Jersey.

1—Select the large flowered dwarf varieties, such as Madame Crozy, Queen Charlotte, J. C. Vaughn, Florence Vaughn, François Crozy, Charles Henderson and Eldorado.

2—*Dracæna indivisa* is one of the most desirable. *D. amabilis* and *D. Baptisti* are strong growers and very fine varieties.

3—*Asparagus* is propagated by division of the roots.

4—Give *pandanus* the sun, though it will do well if partially shaded. A warm greenhouse is the place best suited to this plant, and if kept in a house apartment the conditions aimed at should be a temperature of 65° to 70°, and a moist air and a good light.

++

The Pansy Club.

The school children in this district have an organization which they named "Pansy Club." The object is to learn, in a pleasant, practical way, how plants grow, each member choosing to cultivate with special care one favorite flower. Their motto is "To enhance the beauty of our homes, and strengthen our attachments to our pursuits." The Club is nine months old; it meets every two weeks, when they have songs, recitations, and one flower for study, giving its natural history and culture. Not once have they failed to have a programme carried out, and some of the meetings have been very good. Have about twenty members, more than a dozen flowers are represented, and its influence is perceptible for several miles. They have helped each other by exchanging seeds and plants, and if they chose could make a fine display of summer flowers, and some choice ones. Mrs. J. H.

Lodi, Ohio.

This club will grow in interest to its members as they continue to attend it, and will encourage the study of plant life and plant culture, and be a potent influence for refinement to the whole community.

What other communities will form similar clubs? VICKS MAGAZINE will be sent free to any plant club of this character. When shall we hear that another one is formed? Write and let us know, and the MAGAZINE will be regularly mailed to the address given.

++

Something Wrong with Callas.

I take the liberty to ask you what was wrong with my callas. A friend brought me two nice plants from Columbus, Ohio,—one a spotted calla and the other a white calla. I had them for three years; they seemed to do well for about two months at the first, then the leaves commenced to wither, all but two, and ever after as the third leaf came one would die off, so there were only two green leaves all summer, and the plants never bore a flower. Every fall I lifted the bulbs and stood them in a frost-proof cellar, and in about six weeks after I repotted them; the last time they did not seem to do well and on examining the bulbs I found them rotted. The soil they were planted in was a mixture of rotted sod, chip dirt and sand. I may have given them too much water. Will you kindly tell me what was wrong, and explain how to care for the plants? Willow Island, Neb.

Mrs. H. S.

The spotted calla should have been planted out in the garden in the spring, or have been potted in the spring and kept in growth during the summer, and kept dry during the winter. The white calla it is customary to grow in a pot, starting it early in autumn, and keeping it growing during winter and spring, and then keeping dry during the summer months. But it will also do well if planted out in the summer. Get a good tuber of the white calla and start it now, and it will grow all winter.

++

Experience and Queries.

Last spring I wrote to you in reply to your request to subscribers to tell when they first became purchasers of your goods. As you have given me permission to write again, I gladly avail myself of the privilege, as I wish to ask one or two questions and tell some of my experiences. In my former communication I did not tell you that I have been a reader of the MAGAZINE since January, 1882, and have in one of my book cases many bound volumes, which I often refer to and read from with undiminished pleasure. I hope never to cease being a reader of it while I am able to cultivate and care for plants. I hope this Jubilee year to send you a few subscriptions, as I know a great many flower lovers, and few of them, if any, take your helpful MAGAZINE.

I have a large flower garden this year, and have taken great pleasure among my plants, as well as in cultivating vegetables of all kinds,—planting, weeding and hoeing them myself; in fact, with the exception of the heaviest work, have done everything, and I am quite sure that no "store" potatoes, corn, lettuce or tomatoes ever tasted so good and fresh as these same home-grown vegetables.

I have had some failures with my flowers, especially with seedlings. Of the three papers of aster seed, purchased of you, and sown in a coldframe, I did not get a single plant, for the snails took every one as soon as they appeared above ground. So with many other kinds; some never got a chance to appear at all for the snails were everywhere. Only the poppies and balsams did well, and they were unusually fine. My sweet peas, of which I planted fully a pound, and after the most approved and up-to-date methods, dried up and deteriorated under the extreme heat, although they were magnificent early in the season. The Blanche

Ferrys, especially, were more than usually prodigal in blooming, and with long stems and large blossoms.

One other failure I have to record was with my roses, of which I have a fine collection, all thrifty and profuse in blooming, except my three Vicks Caprice; they were new last year, two-year-old plants, and each had several blossoms. This year one died down below the graft, sending up only wild stock. Another had one blossom in June, of fine form and texture, but a plain purplish pink, without a stripe; since then it has given me one perfect flower, stripe and all. The third plant has grown finely, but has not blossomed at all. Several times before I have tried this rose, but never succeeded in keeping it more than one season. Are they unusually tender, and shy bloomers, or are they among the "fussy plants" that need a good deal of coddling?

Some time I am going to write to the dear old MAGAZINE about my success with roses and some other plants.

MRS. H. M. H.

Auburn, N. Y.

If snail or slugs are present in the garden it is a good plant to give a coating of air-slaked lime to the ground about the plants that are apt to be troubled by them. Bran mixed with molasses is attractive to the slugs and they greedily eat it, and if some Paris green is mixed in they are speedily killed. It may be unnecessary to say that chickens should not be allowed access to the poisoned mixture.

The great heat the past summer was no doubt the cause of the absence of stripes in the petals of Vick's Caprice rose. This variety has not the reputation of being either tender or a shy bloomer. In fact, it enjoys a very enviable reputation for its reliability and its continuous blooming habit.

We shall be pleased to hear from our correspondent, as proposed.

++

Diseased Asters.

The following letter, received by James Vicks Sons, is in the line of a complaint in regard to asters which has come to us from different sources. A communication from a correspondent, given this month on page 185 of this journal, attributes the trouble to root-lice, and probably this was the true cause in the case there mentioned. That there is something more, however, and possibly in the nature of a bacterium, can scarcely be doubted. But at present everyone is in the dark concerning it, or at least as to the treatment or remedy. In January, 1897, the trouble was noted in this MAGAZINE, under the title of "The Aster Disease," and extracts were given from a paper on the subject, by Wm. E. Chappell, read before the Rhode Island Florists' and Gardeners' Club; the writer thought the disease was caused by fungus, but could give no particular instructions as to treatment. More plants, according to Mr. Chappell, failed in the hottest weather than in the spring or fall, and mulching, by keeping the ground cooler, proved a great benefit during the extreme hot weather. Very little in regard to this disease has yet appeared in horticultural publications.

Being disappointed in the result of my effort to secure a crop of your Branching asters this season, I take the liberty of informing you what I have done to secure them, hoping that you may be able to inform me concerning the cause of failure and how I may have better results next season.

On April 17th I planted a package of mixed seeds. Germination took place in seven days, in a hotbed containing new light loam mixed with wood's soil and warmed by a liberal under-layer of old horse manure. The plants remained in the bed until May 22d, when they were transplanted to boxes containing soil of the same character. On June 12th, when the plants were between four and five inches high, all finely shaped, stocky and vigorous, seventy-five of them were transplanted to a new ten-foot circular bed made up of a dark, heavy loam lightened and rounded up with a new light loam, such as potatoes had grown well in, and enriched with old cow manure which was well worked in. For nearly a month all the plants looked alike and seemed to be doing well, but after that time it was noticed that some of them began to decline, a very few wilted and finally died. When this trouble was noticed, the plants were carefully dug around, and finally removed, but there could be discovered no grub at work, nor could any insect be found on the leaves, other than a few small red ants; these were, however, found upon all the other plants which apparently were doing well, and where I have failed to find that they have done any apparent injury. As the season has progressed and the buds begun to show, and the plants have, as a general thing, continued to grow, the greater part of them have shown blight. A month after transplanting, some of the plants ceased altogether to grow, while most have attained their natural height and form, with the branches dying off at the ends. Of the former of these plants, those with stunted growth there are twenty per cent., and of the latter having blighted buds there are sixty per cent. Out of the lot of seventy-five plants which form the bed of which I speak, only fifteen plants, or twenty per cent., are in bloom, or seem in a fair way to do so. The plants have not lacked for cultivation or care, and I am at a loss to know the cause of failure.

The bed mentioned is located in a partially shaded situation; it has both the morning and afternoon sun, however, and is in about the same situation and condition as another bed which I have of the Daybreak asters, planted at the same time, raised in the same hotbed, transplanted to boxes and then to the open ground at the same time, in the same kind of soil, every plant of which is vigorous and in full bloom, and altogether forming a beauty spot on the lawn.

That you may be better enabled to determine wherein lies the trouble which I have mentioned, I herewith send two representative plants. I trust that you may be able through the MAGAZINE, or otherwise, in a few words to acquaint me with the cause of failure and give me the required information for success, so that I, too, may be numbered among those who may have the pleasure of noting the quality and beholding the beauty for which your asters are famous. My ten-foot bed of Vick's Branching asters has been watched this season by many-flower lovers in this neighborhood, and pleasing prophecies have been advanced, based on its thrifty looks. A grave failure has been the result; notwithstanding, I desire next season to see if I may not uphold the admiration and praise which has been bestowed upon them by others in other places.

H. C. O.

North Andover Depot, Mass.

ARTICHOKES AS STOCK FOOD.

AFTER a personal experience of eight years in the cultivation of both the wild and "tame" sorts of the tuberous-rooted artichoke I have concluded that hitherto the cultivation and handling of this tuberous rooted, much praised, much abused perennial, has by many American farmers been greatly misunderstood. The wild artichoke, being indigenous to North America, is fully understood by most farmers; but many do not understand that there is a difference between the wild and cultivated artichoke, yet as a matter of fact they are as different as are wild and "tame" rye, or as wild and "tame" parsnips. The wild artichoke is merely a bad weed and produces very few and small tubers. In many soils it is difficult to exterminate; it sends its long, branching roots deep into the soil like the Canada thistle. The "tame" artichoke is as easily grown as corn, and on land that will produce fifty bushels of corn per acre 500 to 1,200 bushels of artichokes can easily be produced. The value of the tubers as a conditioner, disease preventor, and as a valuable, cheap food for live stock of all kinds, is fast becoming recognized. A wealthy hog raiser, of the writer's acquaintance, says he has had no swine plague in his herds since they have been allowed to root in an artichoke patch to their heart's content; the hogs continue vigorous and free from constipation and the diseased conditions accompanying an all corn diet.

Artichokes are not only a healthy and cheap food for swine, but an excellent food for all kinds of stock during that part of the year, or from October to April, when there is no green grass or clover. The artichoke is an excellent milk producing food for cattle. The writer has fed the tubers to his horses, in connection with corn, oats and sunflower seed, from October to June; after a horse learns to eat artichokes he prefers them to corn or even oats,—they help form a change of diet, correct the digestion, free the organs from worms and make him sleek and fat. Poultry almost live in an artichoke patch during the summer and autumn, where they hide from hawks and scratch out and eat the young tubers. The writer's practical experience in the field and in the feed lot far outweighs, in his estimation, in favor of this vegetable all the articles that he has yet read condemning its cultivation and use. As there are right and wrong methods of doing everything, so also are there successful and unsuccessful methods for growing, handling and feeding artichoke tubers. The first three or four years of the writer in growing and handling the artichoke, were not accompanied by complete success. Eventually he found that the fault was not with the artichoke, but with himself. But as the years have rolled around he considers that he has learned something concerning the most successful methods of cultivation and uses of the artichoke, and today he would not think of farming without a large annual artichoke patch.

Many farmers object to growing artichokes,—they say the plant is so difficult to exterminate. Their experience principally relates to the wild artichoke; nothing is more absurd, as far as the extermination of the cultivated varieties is concerned. During the writer's experience of eight years in annually growing large fields of them, he has learned how to exterminate them easily and completely in one summer; turning under the growing plants with a breaking plow, when about fifteen inches high, or when the old tubers have rotted and the new ones not yet formed, will completely exterminate every vestige of them. Sowing to oats will do likewise; so will pasturing with sheep. If the cultivated artichoke is not allowed to bloom it will form no tubers. Why, "It's as easy as rolling off a log."

One writer says: "Artichokes with me made a yield of about 700 bushels per acre the first year, but in succeeding years they were no good." This farmer, no doubt, pastured his patch when the ground was too wet, and subsequently allowed the artichokes to root for themselves, while he should have cut the tubers, planted and cultivated each year, same as potatoes. If they are not cultivated in this manner the plants grow so thickly together that they produce an over-abundance of foliage and but very few and small tubers; the patch could then be likened to a field of corn sown very thickly, and which yielded an abundance of fodder but very little grain. The writer cuts the tubers to two eyes per piece, and plants five bushels per acre in rows north and south, and cultivates the same as potatoes; he has learned that about November 1st in the Northern States and about December 1st in the Cotton States is much the best time of year in which to plant artichoke tubers, for the reason that they get so much earlier start in the spring and consequently often increase the yield one-third to one-half,—while if the ordering of seed is postponed until spring often vexatious delays in the filling and transit of the order, with the resultant late planting, prevent a full crop of tubers. Like the parsnip, artichoke tubers are not injured by freezing while in the soil; so if wanted for hog feed only, Mr. Hog takes great pleasure in harvesting and consuming the tubers, but if wanted for other kinds of stock the tubers should be plowed out and stored before

November 10th at latest; they can be stored in cellars or in ricks three feet high by four feet thick at base and tapering to the top and as long as desired; three inches of straw next the tubers, followed by not more nor less than three inches of soil, is sufficient for protection through the winter. Feed the tubers whole to all kinds of stock except cattle, for which they should be cut in small pieces.

The artichoke, like the parsnip, radish, and other kinds of vegetables and cereals, quickly "runs out" unless kept in the progressive order by critical annual selection of its most vigorous plants and tubers. The writer, having tested several varieties of artichoke, has retained only the three very best sorts to grow for profit, viz: Mammoth White French, White Jerusalem and Red Jerusalem; seed tubers of these sorts can be supplied by any reliable seedsman.

The writer will take pleasure in answering the letters of all seekers after more information regarding artichokes, who will send postage for reply to letter.

J. C. SUFFERN.

Voorhies, Ill.

* *

NOTES FROM A SOUTHERN GARDEN.

Until this season we had never noticed that the purple wistaria is a "remontant." Since its first profuse spring blooming it has given us several half crops of flowers.

Are Caroline Marniesse and the fine old rose Marie Pavie identical, or has some florist been careless about labels?

Some spider lilies planted this spring, a scarlet and a hardy white, are proving a puzzle to me. But two bulbs were planted, yet now there are half a dozen or more growths, six to eight inches apart, as if small bulbs might have formed at the tips of the roots and thus announced themselves. Next year such a manifestation would not have surprised me, but this is not orthodox for spider lilies the first year after planting.

I have been much interested lately in studying up the accounts of old herbariums, and in conjecturing as to the manner in which the specimens were so perfectly preserved. The oldest herbarium in the world is thought to be the one in the Egyptologist Museum at Cairo. It consists of a large number of wreaths and garlands of flowers collected from ancient Egyptian graves. The flowers that have been protected by an outer covering are said to be, in spite of their extreme delicacy, perfectly intact, while their colors have been preserved in a remarkable manner. The lowest estimate of the age of these specimens is given as 3,000 years, while the oldest herbarium in Europe is only 400 years old. Among the flowers found in this collection are blue and white lotus, red poppies, oriental larkspurs, hollyhocks, chrysanthemums, pomegranates, willow leaves, and several kinds of grasses.

An objection sometimes made to our garden is that it "does not show for half there is in it." Frequently after we have gathered baskets of flowers for friends, they have said "Why, where did all these flowers come from?" And our reply, "From where they will grow, not show the best," does not half satisfy them until they have peered into the snuggeries of different flowers, often magnificent distances apart. We hold that it is a barbarism to keep all of the pot flowers on a plantstand, in full sun, just for the *tout ensemble*, if half of them like shade. Our roses, in the clay loam of the upland garden, can waft only a "good morning" of fragrance to the irises in the bog below the bluff, and our pansies have no idea where the gladioli grow. All the nooks and green spaces about the yard have a few flowers to brighten them, so that you are sure of a bit of beauty anywhere. For the rest, we content ourselves by thinking that it is better to have the flowers of each class as fine as they can be grown, than to have a great assemblage of poor ones.

I was much interested in Mr. Benson's notes on roses in the July number of this MAGAZINE. Concerning Viscountesse Folkestone, Malmaison, Kaiserin Augusta, Etoile de Lyon, Francisca Kruger, Maman Cochet, the La Frances, Meteor and Clothilde Soupert, I agree with him most heartily on every point; but Pink Soupert, Madame DeGraw and the Moss roses will soon be deprived of the space they now have in my rose plot. Some other roses that I cannot praise enough are Ulrich Brunner, Emin Pascha, Prince Camille de Rohan, Anna Olivier and Earl of Dufferin.

Most nurserymen are careful to caution their customers about exposing the roots of plants and trees unnecessarily before planting them, but it is a caution not often heeded. We had a very practical illustration of its value the other day,—the runners had been cut from some rows of choice strawberries in order that the crowns might grow strong, and a number of the runners had fine roots. We thought it was a pity to throw them away, so, after they had been standing in a basket for about an hour, we planted them in fresh rows, watered and shaded them. This last was like locking the stable door after the horse had been stolen. The plants, after standing still for a couple of weeks, are begin-

ning to grow feebly now, and I think most of them will live. Soon after they were planted it began to rain in torrents, with occasional lulls of gentle mist, or perhaps an hour of sunshine now and then,—the usual soggy, sultry weather of "dog days" in this region. The garden was a perfect quagmire, and every path through the yard was a running brook. We bore about a week's confinement to the house heroically, and then one day we took a frolic in the rain. The strawberry plants had taken advantage of the soft, sodden earth to enlarge their borders alarmingly, so we pulled up the runners that had rooted freshly, and set out another row of them,—the rain pouring down all the while! When the mermaid feeling had worn off we felt quite refreshed after our shower bath. And how that row of young plants did grow. They are twice as large as the first rows that were planted two weeks earlier. The leaves of the old Sharpless strawberry are as handsome as those of many foliage plants, especially when growing rapidly in summer, and the young, fresh, green tints contrast brightly with those older and darker.

The most useful plantstand that we had this season was made of three saw-horses of different heights. A broad plank was nailed along the "backbone" of each one, so that when placed together they looked like an ordinary plant stand of three shelves. It is not necessary to call any help to move such a stand,—we simply set off the pots or boxes and move the shelves one at a time. They look very neat, too, when painted green and with vines trailing over them to hide the homely construction.

North Carolina.

L. GREENLEE.



ROSE, PERLE DES ROUGES.

This new variety of the dwarf Polyantha class was briefly mentioned in the article in our last June number entitled "Some of the New Roses." The *Journal of Horticulture* gives an illustration of it made from a specimen exhibited in London the past summer. It is here reproduced, and as will be seen it is of a peculiar and striking form. The *Journal* introduces it in the following words:

Garden or decorative roses are becoming more and more popular, which can scarcely be a matter for surprise when we remember how greatly they enhance the beauty and interest of a garden. Such being the case, any addition to the class that is of more than ordinary excellence is greeted with pleasure by all garden lovers, and to the list we have now added Perle des Rouges, a Polyantha variety of distinct character and striking beauty. The flowers are rather over the average size, and are of a rich velvety crimson color. The petals are peculiar, inasmuch as the outer ones partake largely of the character of the cactus dahlia, in being distinctly fluted; the inner ones are wavy in outline, and slightly recurving.



Yes, frosts are dreadful.

Fall planting for peonies.

Insects do not much trouble ferns.

Now we appreciate a greenhouse.

Shallow bins and more of them for fruit.

Better go lightly on double hyacinths for pots.

Rubber trees are particularly fine after a bath.

Not too hard on the boys. It is because the system so craves fruit that they are tempted.

That more window plants are harmed by oversized pots than by those too small, cannot be too often stated.

Europeans count on our orchards failing as competitors of their own, by soil exhaustion. Like true Americans, let us take the hint.

How do you treat your asparagus bed now? This is our way: In October we clear it of old growth, then a top dressing of stable manure.

The poet-philosopher, Bryant, has well said that some people find fault with Nature for putting thorns on roses, but he thanks her for having put roses on thorns.

Egg plant fruit can be kept until the New Year. Gather before frost has done any harm, and store in a dry, cool place, as in the barn, until freezing weather sets in. Then remove to shelves in a cool, dry cellar.

I keep up the weed battle to the very end. Large, late, isolated plants, that earlier escaped the hoe, will each mature enough seed to stock an acre if allowed its own way. I have my way, and they don't.—D. P. L.

In potting hardy bulbs do not think of leaving out the narcissus. It forces readily,—almost like hyacinths. In cheerfulness of effect the flowers excel almost every other kind. They have the added advantage of great durability.

What this journal needs is, of course, many more subscribers. What many more gardeners need is, of course, a journal like this. "Thank you" in advance, for we are sure you will help on the good cause by starting up some wheels.

Garden trenching. Have you never, in running rows of vegetables across a last year's celery trench, noticed how far ahead the growth at that particular place is over any other part? The writer has, and with it came the best possible arguments for trenching. With him it means turning over the soil two spades deep, working some manure in way down. It is the great remedy against drouth.

For early lettuce next spring, set September-sown plants into coldframes, an inch and a half apart each way. Do not cover until the cold weather sets in, then put on the sash, securing it well against wind, and leave until early spring. In dry, sunny weather during winter the sash should be opened in the daytime; as sun heat increases in the spring they may be entirely removed during the day, except when it is cold. Transplant to the garden as soon as the soil can be worked.

Planting closely. I advocate planting apple trees two rods apart, and thinning out every other two after the twelfth year. By planting closely they do not for many years suffer from crowding, while the alternate trees pay well for the ground they occupy. I have seen the best possible results from thus thinning out orchards. In one instance where the orchard had ceased to bear well and the trees looked dull and unthrifty by mid-summer, by taking out alternate trees the remaining ones by the following season had improved much in appearance and commenced cropping freely. There is always a temptation to plant both fruit and ornamental trees too closely; they look so small when young. The course is a good one provided proper attention is paid later on to liberal thinning out, otherwise better not.—*Peter Frew, Orleans Co., N. Y.*

Plate-book tribe. Someone, partly in deri-

sion, has thus dubbed the tree agents. Making due allowance for the frauds worked by dishonest tree canvassers, we yet say "may their shadows never grow fewer." They have been the true horticultural missionaries of our beloved land, and the plate-books largely have done the business. Catalogues received by mail are effective in their way, but they lack the force of persuasion. If the catalogue amazes the beholder with garden possibilities and impossibilities, the plate-book more so; in the hands of a fair talker the two become irresistible, if the person being labored with has the slightest symptoms of the planting fever. We have the most profound respect for the tree salesmen, who, going over a certain territory year after year, by their reliability win the respect of all they meet, and whose annual visits are always welcome. There are many such; there should be more.



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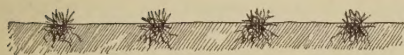
is an "all-the-year-around" fabric—an ideal foundation for evening dresses—a perfect lining for heavy dresses, far lighter and stronger than silk. Every stylish shading. Genuine Nearsilk has tag on each piece.

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NEARSILK

Making Lawns by Transplanting. It seems not generally known that lawns can be made in a way otherwise than by seeding or sodding,—that is, by transplanting, or as it is sometimes called, by inoculation. Success in thus forming a lawn is quite easy to attain, and there are instances, especially in the case of small plats where it has advantages over more usual methods. Indeed, it is a very natural way of stocking a given area with grass, based as it is on the fact that the lawn grasses are of creeping habit; they send out underground stems of greater or less length, according to soil conditions, and thus under favorable circumstances stool and spread rapidly. The upper



MAKING LAWNS BY TRANSPLANTING.

figure annexed shows a plant of lawn grass sketched from life as taken up at the edge of a flower bed on the writer's lawn. Beneath the grass plant is a cross-section showing a bit of lawn planted after the manner here referred to. The method of procedure is to prepare the soil finely and finishing it to be perfectly even; then obtain some sods of good grass and cut them into small pieces, say one or two inches square. These pieces are then set at regular intervals of nine to twelve inches over the entire surface to be converted into lawn, firming them well into the soil by foot pressure. One great advantage in thus making a sward is that with a very little care not a weed need be carried into the new

lawn, a thing not avoidable by either seeding or the ordinary sodding. Should there be dandelions, plantains, or the like in the sods to be used, by dividing as small as prescribed all such can be left out. Another advantage over regular sodding is that it does not require more than about one-twentieth of the sod to stock a given area. An advantage over sowing seed is that no risk is incurred of the seeds not catching. Then, too, a lawn can be made in October, in the north with the assurance, if the soil be fairly fertile, of a good spread of grass by the next summer, whereas to seed a lawn in October is too late for the average season, as the young plants will not get strong enough to winter well.

* *

HINTS FOR HOUSEKEEPERS.

Below will be found recipes for cooking vegetables now in market. These have all been used by experts and found excellent:

Stuffed peppers—Take Large Bell peppers, cut around the stem, remove it and take out all seeds. For the stuffing use two quarts of chopped cabbage, a cupful of white mustard seed, three tablespoonsful of celery seed, two tablespoonsful of salt, half a cup of grated horse radish. Fill each pepper with part of the mixture and into each one put a small onion and a little cucumber. Tie the stem on again, put the peppers in a jar and cover with cold vinegar.

Water Melon pickles—Take the white part of the melon and cut in strips about a finger long, boil until tender or about one and a half hours; put in a colander and drain, then put into a crock. Make a syrup by taking one quart vinegar, three pounds of sugar, and plenty of spices; let boil and pour over the melon.

Pickled Peaches—Eight pounds of fruit, four pounds of sugar, one quart vinegar, two ounces stick cinnamon, two ounces whole cloves. Tie spices in muslin bag; boil vinegar, sugar and spices, then skim. Put in part of the fruit and cook until it can be easily pricked; take out and put in the rest. When all are cooked, boil syrup down to one-half the original quantity and pour over peaches.

Green Tomato pickles—One peck green tomatoes, one-half dozen onions, one ounce whole cloves, one ounce mustard seed, one ounce ground cinnamon, four pounds sugar, two quarts vinegar (not strong). Slice the tomatoes and onions; then put a layer of tomatoes in the bottom of a jar, then a few slices of onions and a sprinkling of salt, then tomatoes and so on till all are used. Stand over night and next morning drain off all the liquor. Put tomatoes in a porcelain kettle and boil in clear water until tender. Have vinegar, spices and sugar boiling; remove tomatoes and drain, then cook in the pickle ten minutes; pack in small stone jars and cover with the liquid.

"Picatilli"—One peck green tomatoes, chop and sprinkle with salt; let them stand all night and in the morning drain through a colander, put them in a kettle and cover with vinegar. After scalding drain off the vinegar and add a head of chopped cabbage, a pint of grated horse radish, a pint of sugar, three green peppers, and enough vinegar to cover; scald about ten minutes.

* *

ORNITHOGALUM ARABICUM.

If a showy white winter blooming bulb is desired, next to the hyacinth, one cannot do better than to get an Ornithogalum Arabicum. It is as sure as anything in plant life can be to bloom, and so beautiful, with a great cluster of snowy blossoms. Each flower will measure two and one-half inches across, and has a bright black, beadlike center which contrasts finely with the white petals. The plant, as its name indicates, comes from Arabia, but it is hardy in the north and may be planted in the garden the same as the hyacinth. It may be potted in four-inch pots during the autumn months for winter blooming. The flowers last a long time on the plant, which is a valuable feature. The flowers when cut are also very lasting.

DAME DURDEN.

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Something new. The greatest thing in the world for Stomach, Nerves, Throat and Breath. Your druggist, or send 5 cents for trial package.

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WAR.

"Wut's the use o' meetin'-goin'
Every Sabbath, wet or dry,
Ef it's right to go a-mowin'
Feller-men like oats and rye?"

I dunno' but wut it's pooty
Trainin' round in bobtail coats,
But it's curus Christian dooty,
This 'ere cuttin' folk's throats."

—James Russell Lowell.

* *

LILIES OF EL DORADO, CAL.

El Dorado county is rich in lilies, having five of the finest species to be found in the United States. The largest of all California lilies is to be found growing here,—this is *Lilium Humboldtii*. It is a giant among lilies, often attaining the height of ten feet and having from twelve to fifty flowers on a single well-grown stalk. The flowers are of a rich orange-yellow color and covered with reddish-brown spots. This plant is highly prized by Eastern people. It can be found on nearly all the Northern slopes having a clay soil, which it seems to prefer.

Lilium pardalinum, or true leopard lily, is found along the mountain streams about 4,000 to 5,000 feet elevation. This is one of the finest of lilies, growing from four to ten feet high, and with its golden-yellow flowers dotted with brown spots, its petals in their upper half being colored blood red. It forms in large stools or clumps among the driftwood, where it seeks the nourishment of vegetable matter which has been collected among the rocks by the storms and washed from the mountains above in winter.

Another fine lily is *Lilium minor*, a dwarf of pardalinum, which grows only about one foot high. This grows in high alpine meadows and along streams. It is a perfect miniature type of larger lilies.

Away in the deep and dark forests, at an elevation of 5,000 feet on some cool northern slope, sheltered by the giant forest trees, can be found *Lilium Washingtonianum*, or the white lily of the Sierras. It is one of the world's most beautiful flowers as it looms up through the underbrush, nodding its head to the northern sky, with waxy white blossoms, from six to thirty in number on a single stalk, and sending out its delicious fragrance to perfume the mountain air and delight the weary traveler who may chance to pass its way. I consider this flower one of nature's most wonderful gifts to the floral world.

The last of the five species that we have here is *Lilium parvum*, seeking its home in the high alpine meadows and along the wooded streams, with its dainty bulb scarcely covered with moss or sometimes a little sand. It grows from two to five feet high and has several erect flowers, red to light yellow in color, only about one and one-half inches long. It is quite a novelty when compared with the larger forms of lilies. —W. G. Watkins, in *Placerville Republican*.



A Well-Kept Shoe

is a comfort and credit to the wearer. A soft, pliable, comfort-giving shoe looks better and wears better than one that's stiff and unyielding.

VICI Leather Dressing

will not only polish your shoes but make them soft. It's a medicine for leather. The ingredients of **VICI LEATHER DRESSING** are used in finishing the most famous shoe leather in the world—**Vici Kid**. That's a little secret you didn't know before. There's a book full of just such secrets about shoes and their care, that you can have if you will send us your name and address.

ROBERT H. FOERDERER, Philadelphia, Pa.



NARCISSUS AND ASTERS.

Your communication in answer to my second letter in regard to the cultivation of narcissus was received some weeks ago; it contained much valuable information to us amateurs in regard to the freaks of the narcissus. Last week I had a chance to ask a friend who, on one Decoration Day wore a corsage bouquet of the largest white flowers of *Narcissus alba pleno odorata* which I had seen that season, how she managed. The answer was that she left the bulbs entirely alone until late fall, then lifted and reset them in rich old soil, and she always has blooms, although many blast. Another who always has blossoms, lifts the bulbs in spring and stores them in sand in the cellar, and sets them again just before freezing weather.

The plants of *Centaurea Marguerite*, after producing a few blossoms, all died; so did those of a friend who had excellent plants last year.

Asters are a great failure in this section. My parents' golden wedding took place the last day of August just past; large quantities of white or light asters I must have for the occasion, so it was with much care and thought that last spring an entirely new bed was made, deep and rich with old soil that had been prepared. My reward was a solid mass of fine blooms, and only two plants out of forty from the package of Snowball were struck by blight. Day-break is all you recommend, with no chance for improvement whatever. The blight struck half of the forty plants of Vick's Branching aster, which were planted in soil where other annuals were sown last year; what are opening are very fine, and more double than I have ever had them. Asters planted where I had them two years all came imperfect, or withered soon after commencing to bloom. This is my first year with *Victoria* asters; they are extra fine, the blight scarcely striking them. Comet grew three feet high. Which are the handsomest is hard to tell. I did astonish my friends at that golden wedding with my variety of fine aster blooms,—just what I intended to do when I sent to you for seeds last March.

Mrs. C. H.

Obi. N. Y.

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THE BEAUTY IN CARING FOR DELICATE EMBROIDERY.

The next thing to a lovely flower garden or bouquet is a center-piece for the table, embroidered with flowers that look as if they grew there. A violet design or a wreath of pansy blossoms is exquisite. After one spends weeks on these works of art it behooves them to understand how to take care of them. First, how to launder them,—and it's best to learn to do this part yourself, so few laundresses can do it properly, it is a dainty piece of work; fill a china bowl with warm water, and make a little suds of some pure white soap, then add a teaspoonful of powdered borax to preserve the delicate colorings and to keep them from being rubbed much; never allow them, however, to get much soiled. All delicate fabrics and table linens should be washed in borax water,—it whitens and softens them. I have seen a lovely piece of work ruined in the first washing,—it was sent out with the clothes and no thought given to it, and the pretty violets and purple pansies were faded white. Alas, for the labor and time that had been spent on such work. There is nothing more refined or dainty than several choice pieces of embroidery, but it is a great mistake not to understand washing them. This is, or should be, the first thought,—how to preserve them. They can be handed down from one generation to another if care is taken of them. Never iron them on the right side and always press when damp. It pays to put much work on an art piece, for "A thing of beauty is a joy forever," and we should esteem it as such. I have embroidery that my grandmother did,—baby caps as dainty and fine and filmy as cobweb lace; how I treasure them, and fear they will vanish out of my hands they are so frail.

Remember to rub the articles lightly between your hands and to iron on the wrong side when quite damp.

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Mention this paper.

NOTES.

LAST spring I ordered a plant of *Rudbeckia Golden Glow*; it was a bit of root, three inches long, the size of a lead pencil, with a bud starting from its side. I put it in a box in the house, where it grew some six inches before it was set in the open ground; then it was set on the edge of a terrace just behind the great block of stone which forms the wall; the soil thus has good drainage at the surface, but a great deal of water comes out of the base of the bank,—it runs for weeks every spring, and damp at all times. Which the *Golden Glow* likes the best, the dry earth or the water two feet below, I cannot tell. The wild *Rudbeckia laciniata*, the parent of *Golden Glow*, and a common plant hereabout, grows only in the water, so far as I have seen, so I infer *Golden Glow* will not object to it. My plant has made a great growth, whatever the reason; its flower stem is four feet high and it has had about eighty flowers, the first one opening August 1st, each flower lasting nearly a month. I am now wrestling with this problem in arithmetic: If a little bit of root will produce a four-foot stem and eighty blossoms, how much will a root big as a washtub produce? For it will be as large as that before it flowers again. Some catalogues promise a height of ten feet, and I am ready to believe anything. Offshoots began to come up in the early summer and there is now a perfect forest of them, making a mass of dark foliage two feet high and four feet through. The flowers have the tall seed cone of the other *rudbeckias* and *obeliscarias*. The later ones are somewhat smaller than the early flowers, but they are better formed. Efficient staking is required, else the immense weight of the rain-soaked flowers will bow the stems to the earth, and I am inclined to recommend a site protected from heavy wind. Altogether the *Rudbeckia Golden Glow* is a grand success.

I concluded once that the Memorial rose, *R. Wichuriana*, did not believe in being layered. I cut its branches on the under side, then pegged them down and covered the place with earth, but not a root appeared; but it stood so near to great maples that their hungry roots dried the ground, so last fall I moved the rose, and now I see that it is rooting wherever its stems lie on the earth. Thus I can propagate it if I like, or make new centers of growth to thicken up the sod. It has some buds yet (September 11th). I find it practically exempt from all rose pests; the squirt gun, precautions and performances which make the writings of all rose experts so depressing, may be dispensed with when you grow this lovely rose. Some winters it is brightly evergreen, others it is much less so, for no assignable cause, though it always carries some foliage with me.

Some years ago I set the *Hydrangea paniculata grandiflora* on a dry knoll (though none of my ground is very dry); it grew very well, but the bloom was apt to be pinched by the drouths of the later summer. Convinced it wanted more moisture, I moved it, last fall, down to a

level-spot which gets lots of water from higher ground in a wet time, with no drainage that I know of, and this year it has covered itself with glory. This *hydrangea*, if not exactly an aquatic, likes plenty of moisture.

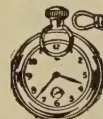
Last year I sent for *Helianthus lateifrons*, a perennial single sunflower; it grew about four feet high and had one flower. Last spring in clearing up the bed I pulled up the old stalk and the whole root came up, dead. "There," said I, "the *lateifrons* has gone up the spout; ah, well, so it is." But after a time I saw twenty or more strong plants covering a place four feet across, coming up, and I was amazed to find them all sunflowers. Dead? Not very much! I partly guess I shall be digging it back one of these days. It is a tall, slender, very erect plant, with large, single golden flowers; a very good thing, but not so good as the *Golden Glow*.

Now the autumn *crocus*, *Colchicum autumnalis*, is in bloom. Its strong leaf-buds started early last spring, and its smooth, dark, erect leaves were a foot or more high in early summer, but they ripened and vanished long ago, and now, September 5th, the flowers are growing right from the ground, the pure white corolla extending down to the earth, four to six inches high,—a white star, two inches across, the same outside and in. It is a curious plant; pretty, too, and I am glad to have it, but, after all, it seems just now a rather slight affair beside the flaming zinnias and calliopsis, or the great cigar-shaped buds and the fragrant cups of the *datura*, ten inches deep, or the white cloud of the *Clematis paniculata*, the forests of perennial phlox, the great violet masses of the New England aster's bloom, the high crown of the *eulalia*, the tall stems and rich flowers of *Hibiscus Crimson Eye*, etc., etc. If it was the first flower of spring it would be a very different matter. They say its seed pods, which are now under ground, will send up a stalk and ripen next summer. Mine never have seeded.

Canaseraga, N. Y.

E. S. GILBERT.

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No. 167

STATE OF NEW YORK



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Dated *Sept 16, 1898* Albany, N. Y.

C. H. Williams
 Commissioner of Agriculture

HOW TO GROW MUSHROOMS.

Procure fresh horse droppings in as large a quantity as possible, shake out the longest straw and add to the pile one-third its weight of new loam, intermixing thoroughly. The compost should be kept under cover, so as to preserve it from wetting by rains, until a sufficient quantity has been collected to make a bed of the desired size.

In making the bed spread out a layer of the material thus prepared from three to four inches

deep and of the required dimensions as to length and width. Tread or tamp this layer until it is quite firm and add others in the same way until the bed is ten or twelve inches in depth. The temperature of this compact mass of soil and droppings will in a few days rise to 100° or over, as may be ascertained on plunging a thermometer into it, and then gradually decline. On going down to the 90° mark it will be in a proper condition for spawning, and this is accomplished by making holes three inches deep and twelve to fourteen inches apart in the bed with a trowel, and inserting therein pieces of brick spawn about two inches square, and replacing the compost. On the completion of this operation it will be found necessary to level the surface again, and the bed should also be made as firm as before spawning. About one week later apply a layer of loam one and a half inches thick to the surface, smoothing and tamping it lightly with the back of a spade.

The temperature and moisture of the mushroom house must now be given daily attention, maintaining the former at from 60° to 70° with a moist air. The bed will not need water until the mushrooms appear, five or six weeks after spawning, and when they show on the surface as large as peas a light watering should be given with water heated to about 100°.

I find the best temperature of a mushroom house to be 60°, with the air moist to a perceptible degree only. The surface of the bed should also be kept moist, applying water when necessary by means of a hand watering-pot with a fine sprinkler, or a hand syringe, using water never below 80°. Air should be admitted to the house from the top, and must always be under control at a temperature never below 45°. Upon entering or leaving, all currents of air likely to pass over the surface should be guarded against. The dry spawn will become active fourteen days after insertion in the bed, but in cases where the bed has been allowed to get dry after the cessation of fermentation,—which often happens in the absence of close attention,—when two weeks have elapsed since spawning, apply water through a fine sprinkler until it penetrates the bed to a depth of two inches, with the water at 90°, at the same time increasing the house temperature 10°. Mushrooms will then appear in four or five weeks.—
John G. Gardener, in American Florist.

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ANNUALS AS WINTER BLOOMERS

THERE are usually to be found, in every flower garden, some annuals that have become dwarfed or stunted, and small plants from late-sown seeds. Many of these will thrive and bloom abundantly if potted during the latter part of September or first of October. Last summer I had a few plants of Japanese

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morning glory that had not kept pace with the others; these were carefully lifted from the ground before frosts came, potted in good, rich soil and set into the coldframe with a few pots of mignonette, sweet alyssum, California poppy, white snapdragon, and a small plant of salvia. As the weather became colder the sashes were put on the coldframe and when severe freezing weather set in the plants were taken to the house and given a sunny window all to themselves; there they thrived and bloomed abundantly for a number of weeks, and when at last they began to succumb to the restraints of indoor life the winter-blooming bulbs were ready to take their places.

The plants named do not by any means embrace all that will thrive in the house; Amaranthus Sunrise makes a fine pot plant; climbing nasturtiums and Cobaea scandens may be trained on a trellis and make beautiful flowering vines. Ten weeks stock, the euphorbias, double daisies, dianthus pinks, and the celosias are all good house plants. I. McRoss.

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